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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/069,047

02/21/2002

Katsuya Sakayori

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EXAMINER

HAIDER, SAIRA BANO

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

08/19/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/069,047	<b>Applicant(s)</b> SAKAYORI ET AL.	
	<b>Examiner</b> SAIRA HAIDER	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 42,44-48,50-55 and 57-65 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 42,44-48,50-55 and 57-65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/14/2008</u> .   | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 1796

**DETAILED ACTION*****Claim Rejections - 35 USC § 102***

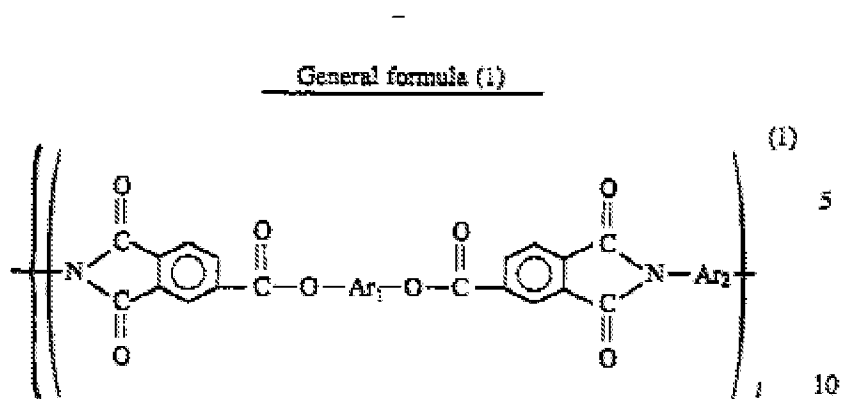
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 42, 44, 45, 47, 48, 50-55, 57-65 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Okamoto et al. (US 5,621,068).

3. Okamoto discloses a polyimide laminate comprising thermoplastic polyimide polymer layers being laminated on both surfaces of a non-thermoplastic polyimide film. The laminate can be used for the base film of a cover-lay film having adhesive-agent layer and a flexible copper-coated laminated board (col. 30, lines 15-30). The inventive thermoplastic polyimide polymer layer is formed of a polyimide resin comprising repeat units of:



Wherein, Ar<sub>1</sub> and Ar<sub>2</sub> are divalent organic radicals (abstract; col. 2, line 59 to col. 3, line 43).

4. Thus, the Okamoto reference discloses the claimed polyimide film comprising the first insulating layer (as per herein claims 42 and 64). Okamoto exemplifies peeling strengths of greater than 300 g/cm (0.3kg/cm) (Table 1).

Art Unit: 1796

5. In reference to the claimed limitations regarding the etching rate ratios, wherein the etching solution is an alkali-aliphatic amine solution comprising monoethanol amine, it is noted that these limitations are rendered properties of the claimed first and second resin layers.

6. Since the prior art teaches the identical chemical structures of the layers comprising the claimed first insulating layer (General Formula (I) of Okamoto), the properties applicant claims (etching rate ratios) are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The burden shifts to the applicant to show an unobvious difference. Note that because the reference does not expressly teach or address the properties of the claimed invention, does not mean that the properties are not inherently disclosed. Disclosing the same compound(s) inherently discloses the corresponding properties. The references cannot possibly address all of the properties, but implicitly all of the properties are present.

7. Claims 52-54 and 61-63 are recognized as product-by-process claims, wherein even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP § 2133.

8. Wherein the claimed product appears to be the same or similar to that of the prior art, although produced by a different process. The Okamoto flexible printed circuit boards are produced by an alkaline etching process (col. 21, lines 49-56). Okamoto fails to disclose that wet etching is utilized, however, since the resulting laminate of the prior art and that claimed comprise the identical chemical structures in each of the layers, the prior art product is deemed to be the same as or similar to the claimed product. The Okamoto reference fails to employ inorganic nitride or inorganic

Art Unit: 1796

fluoride layers, thus, it is the examiner's position that the reference teaches the absence of such layers.

9. In reference to the claims drawn to a suspension for a hard disk drive, these limitations in the preamble reciting the intended use of the claimed invention have been evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. It is the examiners position that a structural difference does not exist. Specifically, the Okamoto product does not structurally differ from the claimed product. Therefore, since a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

10. In regards to the 103 rejection of the claims, as noted above, the claimed property of etching rate ratios is considered inherent to the product of Okamoto. However, the presently claimed function of etching ratios would obviously have been present once the Okamoto laminate is provided. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1997).

### ***Claim Rejections - 35 USC § 103***

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (US 5,621,068).

13. Okamoto fails to disclose the thickness ratio of the core insulating layer to each of the adhesive layers; however Okamoto recognizes that the thickness of the adhesive component of the cover layer film alters the performance of the flexible printed circuit board. Thus, the claimed thickness ratios are rendered result effective variables because changing them will clearly affect the type of product obtained. See MPEP § 2144.05 (B). Case law holds that “discovery of an optimum

Art Unit: 1796

value of a result effective variable in a known process is ordinarily within the skill of the art.” See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

14. In view of this, it would have been obvious to one of ordinary skill in the art to control and modify the thickness ratios and utilize ratios of at the least 1:1 in order to produce a desired flexible printed circuit board.

### ***Response to Arguments***

15. Applicant has essentially argued that the rejection is invalid because the APICAL® material disclosed by Okamoto does not inherently possess the claimed etching rate properties. In response, the APICAL® material of Okamoto does not correspond to the claimed first insulating layer having the claimed etching rate properties. Rather, the rejection states that General formula (I) of Okamoto corresponds to the claimed first insulating layer having the claimed etching rate properties.

16. It is noted that thermoplastic polyimide polymer layer described by General Formula (I) of Okamoto is identical to the claimed first insulating layer comprising the first and second resin layer as claimed by applicant. Accordingly, the claimed etching rate properties are necessarily present in the prior art.

### ***Conclusion***

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

Art Unit: 1796

calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saira Haider whose telephone number is (571) 272-3553. The examiner can normally be reached on Monday-Friday from 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Randy Gulakowski/  
Supervisory Patent Examiner, Art Unit 1796

Saira Haider  
Examiner  
Art Unit 1796